

REMARKS

Applicants respectfully request further examination and reconsideration in view of the comments set forth fully below. Claims 1-15, 19-35, and 44-54 were previously pending. Within the previous Office Action, Claims 1-15, 19-35 and 44-54 have been rejected. By the above amendment, Claims 1, 2, 4-6, 8, 19, 20, 22-24, 30 and 50-54 have been amended, Claims 3, 11, 21 and 44-49 have been canceled and new Claims 55-57 have been added. Accordingly, Claims 1, 2, 4-10, 12-15, 19, 20, 22-35 and 50-57 are now pending.

Rejections Under 35 U.S.C. § 101

Within the previous Office Action, Claims 19-23 and 53 have been rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. In the Decision on Appeal dated December 23, 2009, the Appeal Board concluded that the independent Claims 19 and 53 recite statutory subject matter. Accordingly, this rejection should be withdrawn.

Rejections Under 35 U.S.C. § 102

Within the previous Office Action, Claims 1-15, 19-35 and 44-54 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,675,177 to Webb (hereinafter “Webb”). The applicants respectfully disagree.

Webb teaches a method and system for backing up digital data. Webb teaches that at each backup interval, the computer system sends all files created or modified since the time stamp to the backup system. [Webb, Abstract] Webb further teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] Webb does not teach that a meta data header is added to an isochronous received packet of data at a media storage device. Webb teaches that the server sends meta data for each directory and meta and file stream data for each file on the client volume. [Webb, col. 6, line 64 - col. 7, line 1] Webb also teaches that a meta file is a file that contains a meta header and

a meta entry for each file or directory that exists on a client's computer system at this backup time. [Webb, col. 7, lines 1-3] Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach that a meta data header is added to an isochronous received packet at a media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains meta data at the boundaries of each file. [Webb, Abstract] Webb also does not teaching stripping header data from a previously stored isochronous packet of data at a media storage device and transmitting the retrieved isochronous packet of data to another device.

In contrast to the teachings of Webb, the apparatus and method of the presently claimed invention receives an isochronous received packet of data to be written to the media storage device, adds a meta data header to the received isochronous packet of data at the media storage device thereby forming an extended packet of data, and stores the extended packet of data onto a media within the media storage device. The extended packet of data includes the packet header and the meta data header.

In one embodiment of the presently claimed invention, referring to Figs. 4A and 4B, a series of source packets 60-63 is generated at a source device 50. The source device 50 then applies source packet headers 68-71 to each of the source packets 60-63, respectively. The source device 50 then splits the combination source packets and source packet headers into data blocks, with each source packet being split into multiple data blocks. Some number of the data blocks are then combined into an isochronous packet and the isochronous header and the common isochronous packet (CIP) header are then applied to the isochronous packet by the source device 50. Once the isochronous and CIP headers are applied to the isochronous data packet, the packet is then transmitted by the source device 50 over the IEEE 1394-1995 serial bus to the media storage device 40 of the present invention. When the packet is received by the media storage device 40, a meta-data header is added by the media storage device 40 to the received packet.

As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach that a meta data header is added to an isochronous received packet at a media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract]

The independent Claim 1 is directed to a method of writing data to a media storage device. The method of Claim 1 comprises receiving an isochronous received packet of data over an isochronous channel to be written to the media storage device, the isochronous received packet of data including a packet header, adding a meta data header to the isochronous received packet of data at the media storage device thereby forming an extended packet of data including both the packet header and the meta data header, and storing the extended packet of data onto a media within the media storage device. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 1 is allowable over the teachings of Webb.

Claims 2 and 4-7 are all dependent on the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Webb. Accordingly, the dependent Claims 2 and 4-7 are all also allowable as being dependent on an allowable base claim.

The independent Claim 8 is directed to a method of reading data from a media storage device which has previously been stored with header data generated by the media storage device. The method of Claim 8 comprises locating a first header data, including a cycle mark value having a pattern, reading a previously stored packet of data following the first header data from a media within the media storage device, the previously stored packet of data including a packet

header, stripping the first header data from the previously stored packet of data at the media storage device thereby forming an isochronous retrieved packet of data, and transmitting the isochronous retrieved packet of data over an isochronous channel to another device. As described above, Webb does not teach stripping first header data from the previously stored packet of data at the media storage device and transmitting the isochronous retrieved packet of data to another device. For at least these reasons, the independent Claim 8 is allowable over the teachings of Webb.

Claims 9, 10 and 12-15 are all dependent on the independent Claim 8. As discussed above, the independent Claim 8 is allowable over the teachings of Webb. Accordingly, the dependent Claims 9, 10 and 12-15 are all also allowable as being dependent on an allowable base claim.

The independent Claim 19 is directed to a computer readable medium comprising a meta data header added to isochronous received packets by a media storage device as the packets are recorded on storage media within the media storage device, each of the received isochronous packets including an existing header to which the meta data header is added such that the isochronous received packets include both an existing header and a meta data header. The meta data header of Claim 19 comprises a cycle mark value including a pattern used to locate cycle boundaries within the received packets and a cycle count value specifying a cycle number of a cycle in which the received packets are received. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 19 is allowable over the teachings of Webb.

Claims 20, 22 and 23 are all dependent on the independent Claim 19. As discussed above, the independent Claim 19 is allowable over the teachings of Webb. Accordingly, the dependent Claims 20, 22 and 23 are all also allowable as being dependent on an allowable base claim.

The independent Claim 24 is directed to a media storage device. The media storage device of Claim 24 comprises means for interfacing for receiving an isochronous stream of data, thereby forming a received isochronous stream of data, and also for transmitting a retrieved isochronous stream of data, the received stream of data including packet header data, means for storing data for storing and retrieving the received isochronous stream of data, and means for processing coupled to the means for interfacing and to the means for storing for adding meta header data to the received isochronous stream of data as the received isochronous stream of data is received at the media storage device, such that each packet within the received stream of data includes both packet header data and meta header data, and providing the meta header data and the received isochronous stream of data to the means for storing for recording thereby forming a recorded stream of data, the meta header data including a cycle mark value marking cycle boundaries within the recorded stream of data. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 24 is allowable over the teachings of Webb.

Claims 25-29 are all dependent on the independent Claim 24. As discussed above, the independent Claim 24 is allowable over the teachings of Webb. Accordingly, the dependent Claims 25-29 are all also allowable as being dependent on an allowable base claim.

The independent Claim 30 is directed to a media storage device. The media storage device of Claim 30 comprises an interface circuit to receive an isochronous stream of data, thereby forming a received isochronous stream of data, and also to transmit a retrieved isochronous stream of data, the received isochronous stream of data including packet header data, storage media configured to store and retrieve the received stream of data, and an embedded stream processor coupled to the interface circuit and to the storage media to add meta header data to the received isochronous stream of data as it is received at the media storage

device, such that each packet within the received isochronous stream of data includes both packet header data and meta header data, and provide the meta header data and the received isochronous stream of data to the storage media for recording to form a recorded stream of data, the meta header data including a cycle mark value marking cycle boundaries within the recorded stream of data. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 30 is allowable over the teachings of Webb.

Claims 31-35 are all dependent on the independent Claim 30. As discussed above, the independent Claim 30 is allowable over the teachings of Webb. Accordingly, the dependent Claims 31-35 are all also allowable as being dependent on an allowable base claim.

The independent Claim 50 is directed to a method of writing data to a media storage device. The method of Claim 50 comprises receiving an isochronous received packet of data over an isochronous channel to be written to the media storage device, the isochronous received packet of data including a packet header and a common isochronous packet header, adding a meta data header to the isochronous received packet of data at the media storage device thereby forming an extended packet of data which includes the packet header, the common isochronous packet header and the meta data header and storing the extended packet of data onto a media within the media storage device. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 50 is allowable over the teachings of Webb.

The independent Claim 51 is directed to a media storage device. The media storage device of Claim 51 comprises an interface circuit to receive an isochronous stream of data, thereby forming a received isochronous stream of data, and also to transmit a retrieved isochronous stream of data, storage media configured to store and retrieve the received isochronous stream of data, wherein the isochronous received stream of data includes one or more received isochronous packets of data, each including both a packet header and a common isochronous packet header, and an embedded stream processor coupled to the interface circuit and to the storage media to add a meta data header to each received isochronous packet in the received stream of data as it is received at the media storage device, thereby forming an extended packet of data, and provide the extended packet of data to the storage media for recording to form a recorded stream of data, the meta data header including a cycle mark value marking cycle boundaries within the recorded stream of data. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 51 is allowable over the teachings of Webb.

The independent Claim 52 is directed to a method of writing data to a media storage device. The method of Claim 52 comprises receiving an isochronous received packet of data over an isochronous channel to be written to the media storage device, the isochronous received packet of data including a packet header, wherein the media storage device maintains the packet header with the received packet of data, adding a meta data header to the isochronous received packet of data at the media storage device thereby forming an extended packet of data including both the packet header and the meta data header; and storing the extended packet of data onto a media within the media storage device. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the received isochronous packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the

backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 52 is allowable over the teachings of Webb.

The independent Claim 53 is directed to a computer readable medium comprising a meta data header added to isochronous received packets by a media storage device as the packets are recorded on storage media within the media storage device, each of the isochronous received packets including an existing header, wherein the media storage device maintains the existing header with the isochronous received packets. It is specified in Claim 53 that the meta data header comprises a cycle mark value including a pattern used to locate cycle boundaries within the received packets; and a cycle count value specifying a cycle number of a cycle in which the received packets are received. As described above, Webb does not teach that a meta data header is added to an isochronous received packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the isochronous received packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 53 is allowable over the teachings of Webb.

The independent Claim 54 is directed to a media storage device comprises an interface circuit configured to receive a stream of data, thereby forming a received isochronous stream of data, and also to transmit a retrieved isochronous stream of data, the received stream of data including packet header data, storage media configured to store and retrieve the received isochronous stream of data, and an embedded stream processor coupled to the interface circuit and to the storage media to add meta header data to the received isochronous stream of data as it is received at the media storage device and provide the meta header data and the received isochronous stream of data, including the packet header data, to the storage media for recording to form a recorded stream of data, the meta header data including a cycle mark value marking cycle boundaries within the recorded stream of data. As described above, Webb does not teach that a meta data header is added to a received isochronous packet. Webb teaches that the meta file and the data file are stored separately at the server. [Webb, col. 7, lines 9-14] Webb also does not teach adding a meta data header to the received isochronous packet of data at the media storage device. As described above, Webb teaches that the file stream flowing from the

computer system to the backup system contains metadata at the boundaries of each file. [Webb, Abstract] For at least these reasons, the independent Claim 54 is allowable over the teachings of Webb.

For the reasons given above, Applicants respectfully submit that the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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